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Morio Tomiyama

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EXAMINER

DINH, TAN X

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,186	Applicant(s) TOMIYAMA ET AL.	
	Examiner TAN X. DINH	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1) The amendment/substitute specification filed 9/15/2008 is acknowledged. Claim 2 has been canceled.

2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

3) (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4) Claims 1,6,9,13 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by ARAKAWA et al (6,703,100).

ARAKAWA et al discloses an optical information recording medium as claimed in claim 1, comprising:

a signal substrate that has a center hole and at least a signal face formed on one of the faces of the signal substrate (Fig.6, substrate 26);

a center substrate that is located in a manner to seal the center hole and be flush with the signal face of the signal substrate, the center substrate having a thickness that is equal to or greater than a thickness of the signal substrate and not greater than 1.2mm (Fig.6, center substrate 22, center hole 21); and

a transparent layer that is formed on the signal face of the signal substrate and at least one portion of the center substrate (Fig.6, transparent layer 23 cover a small portion of center substrate 22 (lug 22a or recess 8));

wherein the center substrate includes a means for carrying out a clamping process (the center substrate is used for clamping process).

As to claim 6, ARAKAWA et al shows the joint portion of center substrate and signal substrate are made from the same material (column 15, lines 54-62).

As to claim 9, ARAKAWA et al shows center substrate is made by magnetic material (abstract).

As to claim 13, clamp portion for rotating the optical disc is inherent in every optical recording disc.

As to claim 14, ARAKAWA et al shows a hole with diameter smaller than minimum outer diameter of center substrate (Fig.6, hole 21 is smaller than center substrate 22).

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to

which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6) This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C.103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C.103(c) and potential 35 U.S.C.102(e), (f) or (g) prior art under 35 U.S.C.103(a).

7) Claims 3-5,7,8,10-12 and 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over ARAKAWA et al (6,703,100).

ARAKAWA et al discloses all the subject matter as claimed in claim 3, *except to specifically show that* the transparent layer is formed by applying photo-curable resin to center substrate and drawn to expand through spinning rotations. However, this feature is old and widely used in the optical recording art as admitted by applicant in the specification, pages 2-4 and figures 2 and 3. Obviously, anyone of ordinary skill in the art at the time of the invention was made would have been motivated to use this technique

for forming the transparent layer in ARAKAWA et al's optical disc as claimed.

As to claims 4 and 5, the feature of center substrate and the signal substrate are bonded to each other by using a photocurable resin and the signal substrate and the center substrate are melted by heat and bonded to each other on the side opposite to the signal face of the signal substrate are old and widely used in optical recording art for making optical disc (see applicant's specification, pages 2-4 and figures 2 and 3).

As to claim 7, it would have been obvious to form tapered shape for center substrate since the center substrate could be formed by any desirable sizes and shapes.

As to claim 8, the feature of concavities and convexities on signal substrate is inherent in every optical disc (see applicant's figures 2, concave and convex patterns on recording layer 201).

As to claim 10, it would have been obvious matter of design choice to modify ARAKAWA et al's optical recording medium by having a clamp unit contains material with thermal conductivity not less than 10W/mK, since applicant has not disclosed that having the clamp unit at this specific value could solve any stated problem or is for any particular purpose, and it appears that the clamp unit

in ARAKAWA et al's optical recording medium would perform equally well with or without thermal conductivity not less than 10W/mK as claimed.

As to claim 11, ARAKAWA et al shows the reflective layer in figure 6, layer 25.

Claim 12 is rejected with the same reasons set forth in claim 6 above.

As to claims 13 and 14, the features of using various different position of clamp portions on optical recording medium is old and widely used in the optical recording art.

ARAKAWA et al discloses a method for manufacturing an optical information recording medium as claimed in claim 15, comprises a signal substrate that has a center hole and at least a signal face formed on one of the faces of the signal substrate (Fig.6, substrate 26), inserting a center substrate that is located in a manner to seal the center hole and be flush with the signal face of the signal substrate, the center substrate having a thickness that is equal to or greater than a thickness of the signal substrate and not greater than 1.2mm (Fig.6, center substrate 22 and center hole 21), and the center substrate includes a means for carrying out a clamping process (the center substrate is used for clamping process), *except to specifically show the steps of (i) spin-*

rotating the signal substrate and the center substrate on a rotation table in an integrated state, with photocurable resin dropped on the center substrate, so that the photocurable resin is drawn and expanded, and (ii) curing the photocurable resin through light irradiation so that the center substrate and the signal substrate are formed into an integral part. However, these features are old and widely used in the optical recording art as admitted by applicant in the specification, pages 2-4 and figures 2 and 3. Obviously, anyone of ordinary skill in the art at the time of the invention was made would have been motivated to use these technique in ARAKAWA et al's for manufacturing optical disc as claimed.

As to claims 16-18 and 22, it would have been obvious to use vacuum sucking for fixing center substrate onto rotation table as claimed since the center substrate can be fixed to rotation table by a different numbers of method depends on the choice during manufacturing process.

As to claim 19, to bonding center substrate, signal substrate and transparent layer using photo-curable resin are known in the optical recording art (see applicant's specification, pages 2-4 and figures 2 and 3).

As to claim 20, the method of forming recording layer after signal substrate and center substrate is old and well known in the optical recording art (see applicant's figure 3).

As to claims 21, the method of melting by heat and bonding the signal substrate and the center substrate to each other on the side opposite to the signal face of the signal substrate is old and well known in the optical recording art (see applicant's figure 3).

As to claim 23, the method of applying a bonding agent or a photocurable material to the end face of the center substrate, wherein the rotation table has a function for sucking the center substrate and the signal substrate is old and well known in the optical recording art (see applicant's figure 3).

As to claim 24, the feature of using rotation table for sucking portion of transparent layer is found obvious since anyone within the level of skill in the art could use different methods includes sucking transparent layer to the optical disc during manufacturing process, and the feature of melting by heat and bonding the center substrate and signal substrate has been known in the optical recording art (see applicant's figure 3).

8) Applicant's arguments with respect to claims ~~1-24~~ have been considered but are moot in view of the new ground(s) of rejection.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to **TAN Xuan DINH** whose telephone number is **(571)272-7586**. The examiner can normally be reached on **Monday - Friday from 9:00AM to 5:00PM**.

The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the **Patent Application Information Retrieval (PAIR)** system. Status information for published applications may be obtained from either **Private PAIR** or **Public PAIR**. Status information for unpublished applications is available through **Private PAIR only**. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the **Private PAIR system**, contact the **Electronic Business Center (EBC)** at **866-217-9197** (toll-free).

/TAN Xuan DINH/
Primary Examiner, Art Unit 2627
December 20, 2008